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## Too Many Applicants for Available Graduate Medical Education Positions—Are We on a Collision Course?

RICHARD J. REITEMEIER, MD

Tearsheet requests to Richard J. Reitemeier, MD, professor of medicine, Mayo Clinic, 200 First St., SW, Rochester, Minn. 55901. Dr. Reitemeier is president of the American College of Physicians and chairman of the Accreditation Council on Graduate Medical Education.

### SYNOPSIS

*Until the last few years, graduate medical education (GME) positions were so plentiful in the United States that even with a heavy influx of both U.S. and alien graduates of foreign medical schools, many positions remained unfilled. In the future, however, it is unlikely that all those planning to enter GME in the United States will be able to do so. Applicants for U.S. GME positions increased from 15,000 in 1980 to 20,000 in 1983, while the positions offered declined to fewer than 18,000.*

*Increasing financial pressure may cause some U.S. hospitals to cut back on their GME positions. Recent Federal regulations require them to isolate the*

*cost of education from patient care costs, and community hospitals may no longer wish to provide GME if they can no longer recover educational costs. On the other hand, State legislatures may react to pressures to provide GME positions for U.S. citizens graduating from foreign medical schools.*

*Another factor increasing the demand for GME positions is the greater number of U.S.-citizen graduates from foreign medical schools in the Caribbean. The Caribbean schools generally lack the facilities to provide clinical training, so that efforts are made to provide such training for U.S. citizens in the United States. For example, it has been reported that opportunities for two to five thousand clerical clerkships exist in New York State.*

*Alien and U.S. graduates of foreign medical schools have been required to take different examinations to qualify for GME in the United States, but beginning in 1984, both groups will be required to pass a new Foreign Medical Graduate Examination in the Medical Sciences. Ways are also being sought to assess the clinical skills of these graduates. It is hoped that an equitable system to evaluate all foreign medical graduates will soon be in place, so that those who meet standards comparable to the ones required of U.S. medical students will be able to enter U.S. graduate medical education programs.*

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**A**BOUT 70,000 MEDICAL SCHOOL GRADUATES participated in graduate medical education in the United States in 1983. Essentially all future U.S. medical school graduates plan to enter such programs, but whether they will be able to is not certain. Following the addition of 25 new medical schools in the United States in less than 15 years and increases in the size of the entering class of established schools, the number of graduates from U.S. medical schools has doubled. And the number will continue to increase until 1985, when the students who entered these schools in 1981, the peak year for entry of students, graduate. The number of graduates from osteopathic schools and Canadian medical schools also has increased.

As the number of medical schools in the United States has increased, so has the number of physicians. In fact, the rate of increase in physicians has been greater than that of the general population. From 1976 to 1981, the number of physicians increased by 18.5 percent, while the U.S. population increased 5.4 percent. By 1990, the Graduate Medi-

cal Education National Advisory Committee (GME-NAC) has predicted there will be a large surplus of most types of physicians. As early as 1982, physicians in some communities complained that a surplus already existed. Although there is really no good way to define the need for physicians, indirect measures, such as the inability to gain admission to a hospital staff, suggest to the disappointed physician that any perceived need has already been met.

### Gaining Entry to Graduate Medical Education

There are several methods of gaining entry to graduate medical education programs. Most applicants seek entry through participation in the National Resident Matching Program (NRMP), which allows all applicants desiring positions and all institutions offering those positions to rank their preferences confidentially on a uniform date late in the applicant's senior academic year. Applicants are matched to the program ranking highest on their listing that offers them a position. An estimated 85

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to 90 percent of all first-year positions are offered through the match. However, military and some other residency programs do not participate in the match, and applicants seek entry to them by direct application.

Active applicants for the NRMP soared from 15,000 in 1980 to 20,000 in 1983. In 1982, however, the number of positions offered declined for the first time in decades. The decline continued in 1983, when fewer than 18,000 positions were offered. The number of positions offered decreased by about 400 between 1981 and 1983.

In the 1983 match, 15,500 U.S. medical school graduates applied, and 10 percent withdrew—some of them, with approval of their deans, to enter programs in the U.S. military system (which offers about 700 to 800 positions per year) and some to take advantage of special opportunities for husband and wife physician teams in a single institution. In addition, some U.S. graduates simply elected to obtain their appointments early, outside the match and by an unauthorized route. Ninety-two percent of the remaining U.S. graduates were matched. The 1,100 who failed to match probably obtained positions by the end of the day following the match, although not necessarily in the centers they preferred or even in the specialties of their choice.

Only 8 percent of the 1983 U.S. graduates failed to match, compared with 74 percent of the alien medical graduates. Forty-three percent of the other U.S.-citizen applicants and Canadian applicants were not matched. When this later unmatched group was further separated for analysis, the success for the match was 74 percent for the Fifth Pathway students (U.S. nationals who have completed most course requirements for a medical degree abroad and have had a year of clinical training in a U.S. hospital under a U.S. medical school's sponsorship); 49 percent for the U.S. graduates of foreign medical schools (USFMGs); and 57 percent for the U.S. MDs who had graduated some years earlier but had

pursued further education or research careers before applying for residency training.

Those who were unsuccessful in the 1983 match did what they could to obtain positions. Some obtained them from the 2,700 slots still unfilled at the end of the match day. About 800 U.S. graduates went into these positions. Some of the graduate medical education opportunities are in hospitals to which no U.S. graduates apply and which, therefore, some members of the medical education community suspect provide graduate medical education of a less than desirable quality. Many Fifth Pathway and other foreign medical graduates find positions in these hospitals.

About 15 percent of the U.S. graduates of U.S. medical schools who seek entry into a graduate medical program do not participate in the match, for example, many of those desiring admission to the numerically smaller specialties.

The number of U.S. citizens graduating from foreign medical schools is increasing, and the number of these being certified by the Educational Commission for Foreign Medical Graduates (ECFMG) has risen in each of the last several years.

At the same time, the number of alien FMGs (foreigners who graduate from foreign medical schools) who apply for graduate medical education positions in the United States is also increasing. India and the Philippines have contributed the largest numbers of such applicants. Concerns have been expressed both as to whether the full potential of the foreign medical school graduate is realized in an educational setting in a foreign country and as to whether the educational background of the FMG is as complete and broad as that of the graduate of a U.S. medical school. One indicator supporting such concerns is the low rate of specialty board certification of FMGs in the discipline of internal medicine. Some 84 percent of the graduates of U.S. and Canadian medical schools who had completed graduate medical education programs in internal medicine achieved certification in 1980, 1981, and 1982. In contrast, 29 percent of foreign medical graduates obtained such certification in 1980, 26 percent in 1981, and 25 percent in 1982.

The impact of foreign medical graduates on our graduate medical education system requires further analysis and attention. Since the end of World War II, FMGs have sought opportunities in graduate medical education in the United States in large numbers because this country has been considered to be in the forefront of medical research and the application of new medical technology. Moreover,

in the 1950s, 60s, and 70s, there were ample opportunities for graduate medical education, partly because hospitals could recover most of their costs for graduate medical education under the reimbursement policies of Medicare-Medicaid and private insurance carriers. Until 2 years ago, the gap between medical education positions and medical graduates was sufficiently large that even with a heavy influx of FMGs, many positions still remained unfilled.

Many foreign medical graduates remain in this country to practice medicine. In fact, in the last 17 years, 17 to 46 percent of the initial licenses issued by the boards of medical examiners of the various States went to graduates of foreign medical schools. Again, opportunities for practice existed, and in the 1950s and 1960s, the United States was perceived as having an acute shortage of physicians. Now, however, the opportunities for obtaining positions in graduate medical education are fewer, the competition is greater, and the chances of establishing a practice are less likely, or at least are associated with considerable difficulty.

### **Testing Graduates of Foreign Medical Schools**

Entry examinations are another element of graduate medical education that is changing. Up to the present, foreign medical school graduates who are U.S. citizens have been required to pass a 1-day, cognitive examination as part of the qualification process established by the Educational Commission for Foreign Medical Graduates for entry into U.S.-accredited graduate medical education programs. However, since 1976, most alien FMGs have been required to pass a relatively more stringent 2-day examination (termed the Visa Qualifying Examination), comparable to Parts I and II of the examination given by the National Board of Medical Examiners to many students of U.S. medical schools.

In 1984, a new examination, uniformly applicable to both U.S. and alien graduates of foreign medical schools, will be in place. To be termed the Foreign Medical Graduate Examination in the Medical Sciences, it will be comparable in content, and eventually in timing, to Parts I and II of the National Board of Medical Examiners examination. The Accreditation Council for Graduate Medical Education, which is responsible for the quality of graduate medical education, has accepted the new examination as satisfactory for testing the basic science and clinical knowledge of FMGs.

The council hopes eventually to identify a pro-

cess that will fairly assess the clinical skills of FMGs, an attribute not being tested at present. If it succeeds in finding a way to do this, then the requirements for entry into programs of graduate medical education will be still more comparable for all medical school graduates. Medical schools in the United States and Canada are subject to a formal and exact accreditation process conducted by the Liaison Commission on Medical Education; in addition, medical school faculty members evaluate the student's clinical skills over a prolonged period. However, the accrediting standards and clinical evaluation process of medical schools in other countries vary substantially from school to school. In many instances, they are believed to be below U.S. standards.

By virtue of their U.S. citizenship, the growing number of U.S.-citizen graduates of foreign medical schools constitute a special case for consideration. In internal medicine (the largest specialty), the number of USFMGs entering first-year residency training increased by 56 percent in 1981 and by 26 percent in 1982. Sixty-eight percent of the USFMGs entering first-year residency programs, enter programs in New York and New Jersey and other locations in the Northeast.

For a number of years most USFMGs came from the school at Guadalajara in Mexico; some came, however, from European schools, especially from one in Italy at Bologna. More recently, proprietary schools have been set up in the Caribbean Islands, and new schools also have appeared in Mexico. For some time U.S. citizens (usually those unsuccessful in obtaining admission to U.S. medical schools) have sought an undergraduate professional education in schools outside the United States, which are out of reach of the accreditation system for U.S. and Canadian schools. What is new is the magnitude of the current establishment of proprietary foreign medical schools in the Caribbean and Mexico, as well as the need of these schools to obtain for their students the necessary years of clinical training in U.S. hospitals, since the clinical facilities locally available do not suffice. The U.S. medical students attending these schools wish to return to the United States to enter graduate medical education, and eventually, to practice here.

Many U.S. students in foreign schools are from New York and New Jersey. The New York State Education Department, acting under direction of the New York Board of Regents, has tried to help U.S. students in foreign medical schools obtain clinical clerkships in New York hospitals. Although precise

data are lacking, one source has estimated that 2,000 to 5,000 such students are taking clinical clerkships in New York. Apparently twice as many students apply as are admitted to these clerkships. Medical schools in the Caribbean are reported to pay a New York hospital \$500 to \$2,000 per clerkship.

The New York State Board of Regents recently instituted a rule that both the medical school in the foreign country and the hospital in New York must have a site visit if students from foreign schools are to take clerkships in the State. However, this rule applies only if the duration of the clerkship is greater than 12 weeks; clerkships that are 12 weeks long or less are exempt. Fifty-five New York hospitals may be involved in this activity. The monitoring of this policy will be difficult. I have seen no published information describing how the system will be monitored and with what frequency.

Under the new rules governing clerkships for students in foreign medical schools, the New York State Education Department approved the Universidad Del Noreste, Tampico, Mexico, for the placement of third- and fourth-year medical students in New York in what are termed "teaching hospitals." When I recently queried the New York State Board of Medicine about the clerkship policies and their definition of a teaching hospital, I was informed that a teaching hospital is one having a residency accredited by the Accreditation Council for Graduate Medical Education or "an equivalent accrediting agency acceptable to the New York State Education Department." A "teaching hospital" can also be a hospital affiliated with such an accredited program.

To be eligible for clerkships in New York, foreign medical students are required to perform satisfactorily on the Medical Science Knowledge Profile Examination. When I queried the New York State Board of Medicine as to how the passing score was determined for the State's purposes, I learned that a score at or above 1.2 standard deviations below the mean for all second-year medical students in U.S. schools is used. However, the final minimum score is actually determined by the New York State Education Department.

This department also evaluates the foreign medical school to determine whether it meets the standards that the department has established. The evaluation includes a site visit by a team consisting primarily of physicians who have experience in programs of medical education. I do not know how many other schools besides the one in Tampico have been evaluated.

At an interim meeting of the American Medical Association in Miami, Fla., in December 1982, Dr. John H. Clark and Dr. Harold E. Jervy, Jr., of the Federation of State Medical Boards reported on the efforts of that organization to obtain information about some of the foreign medical schools for their member boards. Eight schools about which information was most frequently desired were given the opportunity to provide it in the same format as that used by the Liaison Committee on Medical Education and to have a site visit. Of the eight, four refused, three have delayed, and only one has submitted information (Central Del Este in the Dominican Republic).

The Michigan State Board of Medicine is reportedly giving up its efforts to approve foreign medical schools before licensing their graduates (1). The board cited as major reasons its inability to formulate and apply uniform standards and the schools' lack of cooperation. Other problems were the language barrier, legal threats, and a cultural difference. In the future, the Michigan board intends to confine its activities to evaluating the fitness of the graduates of these schools.

Other State medical boards are taking an opposite course. The New Jersey delegation reported at the December 1982 American Medical Association meeting that the State Medical Board of New Jersey would conduct academic reviews of foreign medical schools in conjunction with the New Jersey State Department of Higher Education. The review will determine the quality of the schools' basic science and didactic programs, as well as their clinical training programs in New Jersey hospitals.

I suspect that the Accreditation Council for Graduate Medical Education will tend to support the stance of the Michigan State Board of Medicine and set standards that will fairly assess the abilities, knowledge, and clinical skills of the individual graduate of a foreign medical school. One would hope also that U.S. citizens would soon confine their interest in professional education to being admitted to one of this country's medical schools where national standards are applied. Applications to U.S. schools have been declining since 1976, and the difficulty in obtaining admission to U.S. schools—so severe in the recent past—seems to be diminishing. At the moment, however, a student of a foreign medical school apparently can obtain clinical training in U.S. hospitals without benefit of a structured or planned curriculum or an evaluation of his or her progress, acquisition of skills, and so forth.

I return then to the hope that an equitable system

will soon be in place to evaluate foreign medical graduates, so that those who meet standards comparable to the standards required of U.S. medical students will be able to enter U.S. graduate medical education programs.

### **Fewer Graduate Education Positions**

As to the future, U.S. medical schools will almost certainly reduce the numbers of their first-year positions. This process began in 1982, when 100 fewer first-year positions were available in U.S. schools than in 1981; in 1983, about 75 fewer than in 1982 are expected, although this figure may change by September 1983, as schools such as the University of Michigan continue to consider whether to eliminate some first-year positions.

These reductions do not seem to result from a determination by the schools that an excess number of physicians are being trained but rather from reductions in school budgets and faculty positions. As a group, the medical schools have not advanced the thesis that it is their special responsibility to determine and regulate the appropriate number of physicians for the United States, and indeed no mechanism has even been accepted for determining how an appropriate number can or should be selected.

The United States as a whole has experienced a decrease in graduate medical education positions; fewer were offered in the match in 1982 and 1983 than in the preceding year. The decrease, however, has been spotty; in some specialty disciplines, the number of positions has decreased more than in others, and some of the decreases have been directed more by State concerns about the costs of graduate medical education than by specialty considerations; for example, the five University of California medical schools reduced the number of first-year positions by 100 in 1983.

I imagine that the American public would have considerable sympathy for graduates of medical schools, particularly graduates of our own medical schools, if they were unable to obtain a graduate medical education position in the field of their choice. If this kind of mismatch became prevalent and received sufficient public attention, it is conceivable that efforts could be made to provide more positions for graduate medical education in U.S. hospitals. However, those responsible for the quality of education in our training programs would no doubt immediately warn that any expansion in the number of programs or positions must not be at the expense of diluting the educational quality in

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each program. The special requirements of each residency review committee have been carefully established by peers in each specialty, and these standards should not be compromised to accommodate more students.

The United States is not the only country facing the problem of more candidates than available graduate medical education positions. Great Britain, Ireland, and other Western European countries are having similar problems. Israel has produced physicians in excess of its needs for decades. Some physicians in Europe are even forced to seek financial help from their countries' welfare agencies, something almost unheard of in the United States. The attitude in these countries seems to be that the unsuccessful physician candidate should simply carry on. The candidate may wait another year to apply for a position and while waiting work at whatever is available. Some of the unsuccessful candidates work on the family farm, sell clothes, and the like. Other more senior candidates in these countries, who are already in the graduate medical education system but unsuccessful in advancing to a desired subspecialty position, may mark time for yet another year in a position in which they have already served. Some U.S. medical graduates may have to do the same if the extent of the mismatch increases.

### **Financial Support of Graduate Education**

Many factors may determine the number of graduate medical education positions in the United States. One pragmatic and immediate factor is the increasing financial pressure on U.S. hospitals. It may cause some hospitals to cut back on their graduate medical education positions. The hospital has to balance the benefit it receives from the residents against educational costs and consider whether the services that residents render can be provided in other ways.

The cost of hospital medical care in teaching

hospitals includes financial support for graduate medical education, although this inclusion is not based on a stated policy agreed upon within the private sector of medicine or accepted by Government and third-party carriers. Even if this practice should become accepted policy, a significant mismatch between the numbers of candidates and of positions could still exist. The reason is that the quality of the education provided in the training programs depends not only on the financial support of the program and of the residents, but also upon the matrix of the kinds of patients, faculty, and facilities, plus the opportunities the residents have to progress in acquiring the desired knowledge and skills. Having too many residents in a program, even if funded, could impair the program's value.

In a recent discussion of the particulars of academic health centers, Ebert and Brown (2) observed that the Federal Government does not intend to subsidize education for the health professions in the absence of shortages, and we have no shortage of physicians. However, U.S. citizens attending foreign medical schools are a political reality, and State legislatures may react to pressure to provide graduate medical education positions for them. On the other hand, recent Federal regulations require hospitals for the first time to isolate the cost of education and the cost of research from patient care costs. Once isolated and identified, the cost of graduate medical education may be a source of governmental interest and further regulation. Community hospitals may no longer wish to participate in graduate medical education as affiliated institutions if they no longer can recover educational costs as part of their reimbursement.

Of the approximately 5,000 acute general care hospitals in the United States in 1983, 1,100 were either owned or managed by corporations. The change to corporate ownership or management has been rapid. Now 5 to 10 percent of the total U.S. hospital beds added each year are added by corporations that have no tradition of interest in, or support of, graduate medical education. The future impact of health care corporations may yet be considerable, since some corporations are evidencing interest in acquiring teaching hospitals or providing management for them.

In Canada, where a number of Canadian graduates were unable to obtain graduate medical positions in 1983, some interns may already be working for nothing; it has also been reported that a tiny number of medical residents in the United States work without a stipend.

## Questions That Need Answers

- If we believe we are training too many physicians, how do we reduce this number, and who makes the decision?
- If there are too few graduate medical education positions, should we increase the number of positions? If so, how can we protect the quality of our programs?
- Is the criticism valid that our residents see and know only what is done in tertiary care centers and have little knowledge of common medical problems? If so, should we reduce the residents' time in the major teaching center and replace it with time in community hospitals?
- Should we set standards for entry into our graduate medical education programs that are the same for all candidates, accepting the fact that as a result, many fewer foreign medical graduates will receive their training in the United States?
- Should we urge that the cost of graduate medical education be a part of the cost of patient care in the hospital?
- Rather than classifying or treating all alien foreign medical graduates like U.S. graduates and putting them through the general graduate medical education system, should we create some entirely different kinds of educational opportunities for those who need exposure and training only in special areas or techniques that they can take back to their native land?

## Focus on the Patient

Finally, the responsibility and accountability of each of us involved in undergraduate and graduate medical education should focus on the American patient. It is the patient whose identity, person, welfare, comfort, and health care needs should occupy our attention. While serving these needs, we can and do create opportunities for education, but the education should not assume primacy. If we remain faithful to this concept, then the society we try to serve will permit us to continue to carry out the health care mission.

## References .....

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2. Ebert, R., and Brown, S.: Academic health centers. *N Engl J Med* 308: 1200-1208, May 19, 1983.